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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/036,531	01/07/2002	Robert Frigg	8932-591	4875

20582 7590 01/21/2004

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EXAMINER

COMSTOCK, DAVID C

ART UNIT PAPER NUMBER

3732

DATE MAILED: 01/21/2004

9

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/036,531

Applicant(s)

FRIGG ET AL.

Examiner

David Comstock

Art Unit

3732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-65 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26-42 is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 11-25, 43-52 and 56-65 is/are rejected.
- 7) ☒ Claim(s) 6, 8-10 and 53-55 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: *Attachments A and B*.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5, 7, 11, 12, 15, 16, 18, 24, 25, 43, 44, 47, 48, 50, 51 and 60-65 are rejected under 35 U.S.C. 102(e) as being anticipated by Michelson (6,193,721).

Michelson shows a device comprising a bone fastener having a shank 170, a head 300, and a collar. (See Figs. 64-66 and Attachment A.) The head comprises a convex, semispherical top portion (see Fig. 64). The collar has three circular, disk-shaped portions, a top portion and two lower portions. Each of the portions of the collar has a constant diameter. The lower portions form two edges which are circular and substantially sharp, i.e., not rounded. The edges define two rings, i.e., the sides of the collar lower portions. The circular edges of the lower portions contact an inner surface of a bore 602 in a receiving member 600 (see Figs. 63 and 65). The bore comprises a first portion of constant diameter, i.e., the portion housing collar lower portion (1), and a second threaded portion having two diameters, a thread major diameter and a thread minor diameter (see Fig. 66 and Attachment A). The head is removably seated on the collar and shank. The receiving member has a channel 670 extending transverse to a

central axis of a bore. The channel receives a longitudinal support 54,106 (see Figs 39 and 63). The lower contour of the collar lower portion (1) defines a radial extent of a plane bearing surface, i.e., the underside of the collar lower portion (1) (see Fig. 66 and Attachment A).

Claims 1-5, 7, 11, 12, 17, 19-22, 24, 25, 43-46 and 60-65 are rejected under 35 U.S.C. 102(e) as being anticipated by Michelson (6,193,721).

Michelson shows a device comprising a bone fastener having a shank 170, a head, and a collar. (See Figs. 65, 66 and Attachment B.) The collar has a top portion and two circular, disk-shaped lower portions. Each of the portions of the collar has a constant diameter. The lower portions form two edges which are circular and substantially sharp, i.e., not rounded. The edges define two rings, i.e., the sides of the collar lower portions. The circular edges of the lower portions contact an inner surface of a bore 602 in a receiving member 600 (see Figs. 63 and 65). The bore comprises a first portion of constant diameter, i.e., the portion housing collar lower portion (1), and a second threaded portion having two diameters, a thread major diameter and a thread minor diameter (see Fig. 66 and Attachment B). The head is integrally formed as the end of the shank. The receiving member has a channel 670 extending transverse to a central axis of a bore. The channel receives a longitudinal support 54,106 (see Figs 39 and 63). The lower contour of the collar lower portion (1) defines a radial extent of a plane bearing surface, i.e., the underside of the collar lower portion (1) (see Fig. 66 and Attachment B). A grub screw 300 releasably and threadably locks the fastener with respect to the receiving member (see Figs. 63-66 and Attachment B).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13, 14, 23, 49, 52 and 56-59 rejected under 35 U.S.C. 103(a) as being unpatentable over Michelson (6,193,721).

Michelson discloses the claimed invention except for a collar diameter between 4 mm and 10 mm, a collar edge diameter between 8 mm and 10 mm, and a collar thickness between 0.5 mm and 2 mm, and an external shank diameter between 3 mm and 6 mm. It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the collar with a diameter between 4 mm and 10 mm, an edge diameter between 8 mm and 10 mm, and a thickness between 0.5 mm and 2 mm, and to form the shank with an external diameter between 3 mm and 6 mm, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. With regard to claim 23, it also would have been obvious to form the inner surface of a deformable material since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. With regard to claims 49 and 52, removable heads and integral heads are functionally equivalent types of fastener heads known in the art (see e.g. Jacob et al. [5,084,048],

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Fig. 1 and col. 3, lines 51-53). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute an integral head for a removable, separately formed head since this is merely the substitution of functionally equivalent types of fasteners known in the art. Furthermore, a person of ordinary skill in the art would readily use a threaded interface to form the removable head, since threads are an old and ubiquitous means of connection known in the art.

### ***Allowable Subject Matter***

Claims 6, 8-10 and 53-55 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 26-42 are allowable over the prior art of record.

### ***Response to Arguments***

Applicant's arguments, see page 10, lines 1-8 and page 11, lines 20-27, filed 30 October 2003, with respect to the rejection(s) of claim(s) 1-52 and 55-61 under 35 USC 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection has been made in view of Michelson (6,193,721), as set forth above.

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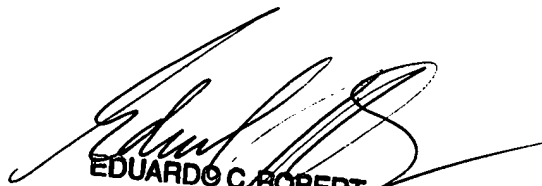
**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Comstock whose telephone number is

(703) 308-8514.

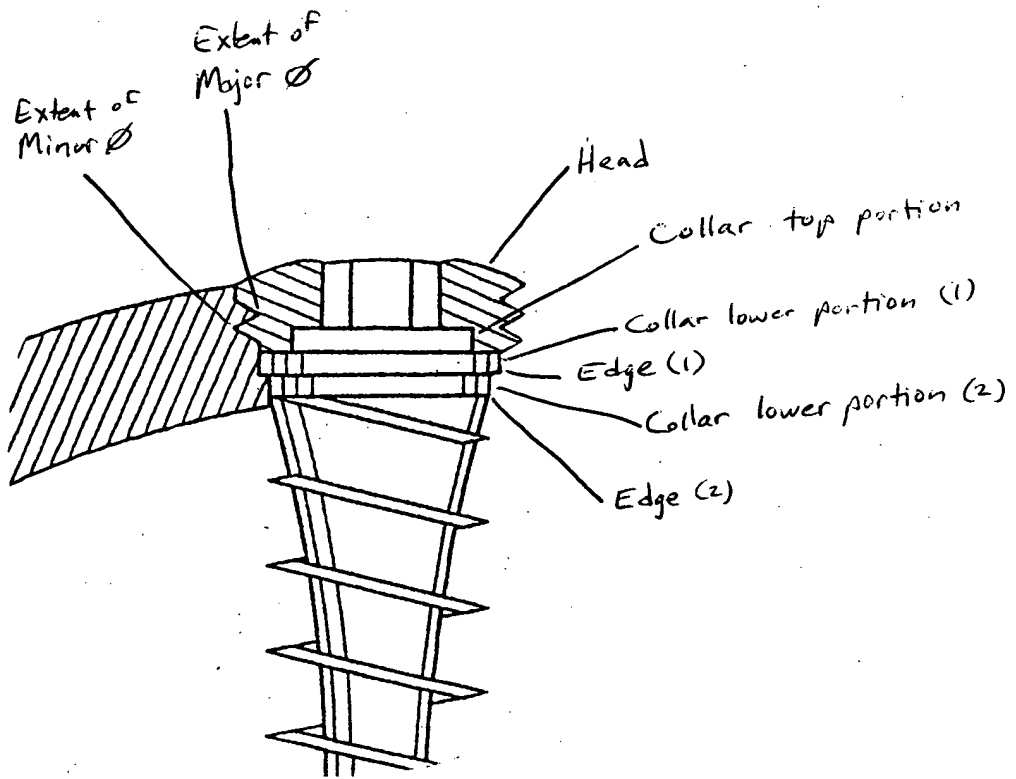


D.C. Comstock  
9 January 2004



EDUARDO C. ROBERT  
PRIMARY EXAMINER

# Attachment A





# Attachment B

